LightBOX

Dynamic overhead white LED ambient lighting is more conducive to an individual's morning psycho-physiological wellbeing when compared to the constant lighting in workplaces where there is minimal natural daylight penetration or a windowless work space. A lighting pattern of '500 increased to 1000 lux' (lux is the measurement of light intensity) therapeutically suppresses the workers' urinary aMT6s (melatonin metabolite). It also improves their morning alertness, mood, cognitive task performances, and visual comfort. This alternative human rhythmic dynamic lighting pattern for morning periods in tropical Malaysia differs from the dynamic lighting pattern developed by studies from the West for their morning boosting effect application during winter. While the West had levels of illumination in decreasing oscillation, tropical Malaysia needs an increasing one for our windowless open-plan workplace. The LightBOX has different overhead white LED ambient lighting configurations. Users can experience the effect of different light intensities against their bodies' own responses. When the user moves between the spaces while seeking the highest and lowest light intensities, the body is consciously aware of the deepening sleepiness or the heightening alertness. The brightest ambient light helps improve psychological alertness naturally during morning work time in the workplace. These oscillating light experiences guide researchers toward developing new dynamic tropical lighting strategies for enhancing the psycho-physiological wellbeing and organisational productivity of the local workforce.

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